

WHAT IS CLAIMED IS:

1. A solar cell having an electrode coated with lead-free solder, wherein phosphorus is included in said lead-free solder.

2. The solar cell according to claim 1, wherein an amount of phosphorus in said lead-free solder is 0.00001 to 0.5 mass %.

3. The solar cell according to claim 1, wherein said lead-free solder is Sn-Bi-Ag based solder.

4. The solar cell according to claim 1, wherein said electrode is a silver electrode formed by firing silver paste.

5. The solar cell according to claim 4, wherein an average grain size of powdery glass included in said silver paste is 11  $\mu\text{m}$  at most.

6. The solar cell according to claim 4, wherein an amount of powdery glass included in said silver paste is 2.8 to 10.0 mass %.

7. The solar cell according to claim 4, wherein said silver paste has an average thickness of at least 15  $\mu\text{m}$ .

8. A fabrication method of a solar cell comprising the steps of printing silver paste at a partial region at a light receiving side of an anti-reflection film and at a partial region at a back side of a p type silicon substrate, firing said silver paste to form a silver electrode, and coating said silver electrode with lead-free solder including phosphorus, wherein  
5 powdery glass sifted through a sieve having an opening diameter of 73  $\mu\text{m}$  at most is used as said powdery glass included in said silver paste.

9. A fabrication method of a solar cell comprising the steps of printing silver paste at a partial region at a light receiving side of an anti-

5 reflection film and at a partial region at a back side of a p type silicon substrate, firing said silver paste to form a silver electrode, and coating said silver electrode with lead-free solder including phosphorus, wherein the step of printing silver paste includes applying silver paste at least two times.

10. A fabrication method of a solar cell comprising the steps of printing silver paste at a partial region at a light receiving side of an anti-reflection film and at a partial region at a back side of a p type silicon substrate, firing said silver paste to form a silver paste electrode, and  
5 coating said silver paste electrode with lead-free solder including phosphorus, wherein the step of printing silver paste includes applying silver paste using a mask having a thickness of three times a wire diameter.

11. An interconnector for a solar cell, said interconnector coated with lead-free solder, said lead-free solder including phosphorous.

12. A solar cell string interconnecting a solar cell coated with lead-free solder with a solar cell interconnector coated with lead-free solder, wherein said lead-free solder applied as a coating on said solar cell and said interconnector includes phosphorous.

13. The solar cell string according to claim 12, wherein said lead-free solder applied as a coating on the solar cell and the solar cell interconnector has the same composition.

14. A solar cell module incorporated with a string interconnecting a solar cell coated with lead-free solder including phosphorous with a solar cell interconnector coated with lead-free solder including phosphorous.